

WHAT IS CLAIMED IS:

1. An oscillator comprising:
  - a transistor having a collector receiving a power
  - 5 supply voltage;
  - a first capacitor connected between a base and an emitter of the transistor;
  - a second capacitor connected between the first capacitor and ground;
  - 10 a resistor connected between the collector and the base of the transistor;
  - a first inductor connected between the base of the transistor and ground; and
  - a second inductor connected to the emitter of the
  - 15 transistor and the first inductor.
2. The oscillator as claimed in claim 1, wherein the second inductor is grounded via a part of the first inductor.
- 20 3. The oscillator as claimed in claim 1, further comprising an output terminal via which an oscillation signal is output, the output terminal being connected to one end of the first inductor.
- 25 4. The oscillator as claimed in claim 1, further comprising an output terminal via which an oscillation signal is output, the output terminal being connected to an intermediate node of the first inductor
- 30 to which the second inductor is connected.
5. The oscillator as claimed in claim 1, further comprising:
  - an output terminal via which an oscillation
  - 35 signal is output, the output terminal being connected to one end of the first inductor; and
  - a matching circuit that is connected to the

output terminal and includes a third capacitor.

6. The oscillator as claimed in claim 1,  
further comprising:

5 an output terminal via which an oscillation  
signal is output, the output terminal being connected  
to an intermediate node the first inductor to which the  
second inductor is connected; and  
a matching circuit that is connected to the  
10 output terminal and includes a third capacitor.

7. The oscillator as claimed in claim 1,  
further comprising:

an output terminal via which an oscillation  
15 signal is output, the output terminal being connected  
to one end of the first inductor; and  
an impedance adjustment circuit connected to the  
output terminal.

20 8. The oscillator as claimed in claim 1,  
further comprising:

an output terminal via which an oscillation  
signal is output, the output terminal being connected  
to an intermediate node the first inductor to which the  
25 second inductor is connected; and  
an impedance adjustment circuit connected to the  
output terminal.

9. The oscillator as claimed in claim 5,  
30 further comprising a substrate on which the transistor  
is formed, the substrate having a conductive pattern  
that forms the third capacitor.

10. The oscillator as claimed in claim 6,  
35 further comprising a substrate on which the transistor  
is formed, the substrate having a conductive pattern  
that forms the third capacitor.

11. The oscillator as claimed in claim 1,  
wherein the first inductor comprises a transmission  
line.

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12. The oscillator as claimed in claim 1,  
wherein the first inductor includes a micro stripline.

13. The oscillator as claimed in claim 1,  
10 further comprising a variable capacitance diode that is  
connected to the first inductor and receives a control  
signal via a control terminal of the oscillator, so  
that an oscillation frequency can be adjusted  
externally.

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